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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,080	06/22/2005	Christine Volker	VOLKER-1 PCT	3317

25889 7590 05/11/2007

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EXAMINER	
PHILLIPS, FORREST M	

ART UNIT	PAPER NUMBER
2837	

MAIL DATE	DELIVERY MODE
05/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,080	VOLKER, CHRISTINE	
	Examiner	Art Unit	
	Forrest M. Phillips	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/22/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,3-5,7,9,11-18,21,24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck et al (US 5959264) in view of Parkinson (US2177393).

With respect to claim 1 Bruck discloses an airborne sound-absorbing component,in particular for motor vehicles (see column 3 lines 10-15) comprising a resonance absorber with a plurality of differently sized hollow chambers (4 in figure 2) spaced apart from each other, and wherein in each instance the hollow chambers comprise a wall section (10 in figure 2), which faces the incoming sound, wherein the wall sections, which face the incoming sound and are able to oscillate are closed off so as to be airtight (abstract).

Bruck does not disclose a porous sound-absorbing layer, or the spacers.

Parkinson discloses an airborne sound-absorbing component comprising a resonance absorber (14 in figure 3) and comprising a porous sound absorbing layer (8 in figure 3) which layer faces the incoming sound, wherein the resonance absorber comprises one or several spacers (4 in figure 3) such that at least the majority of the wall sections of resonance component (14) which face the incoming sound, do not

establish contact with the porous layer and are able to oscillate independently of said porous layer (see column 3 lines 5-40, column 4 lines 20-45).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Parkinson to have a porous sound-absorber spaced apart from a resonance member with the resonant structure of Bruck to provide attenuation of higher frequency sound.

With respect to claim 3 Parkinson further discloses wherein the spacers are glued or injection moulded to the resonance member (Column 2 lines 5-10).

With respect to claim 4 Parkinson further discloses wherein the spacers are held with positive fit to the resonance absorber or are clip-lockable (Column 3 lines 5-10 suggests the use of tacking adhering. Further more It would have been an obvious to one having ordinary skill in the art at the time the invention was made to utilize mechanical fasteners of any type to attach the spacers since the examiner takes Office Notice of the equivalence of positive fit and clip lockable fasteners and tacking and adhesives for their use in the acoustic panel art and the selection of any of these known equivalents to connect the spacers would be within the level of ordinary skill in the art.

With respect to claim 5 Parkinson further discloses wherein the spacers are arranged between resonant chambers and spaced apart from these (see figure 3) it would have been obvious to apply this teaching of not having the spacer interfere with the resonance to the resonant structure of Bruck.

With respect to claim 7 Parkinson further discloses wherein air filled voids (unnumbered see figure 3) which are ensured by the spacer or spacers between the porous layer and the wall section of the hollow chambers which wall sections face the incoming sound and are able to oscillate.

Bruck demonstrates the different heights.

With respect to claim 9 Parkinson further discloses wherein the porous layer is made from a layer of nonwoven material or a layer of open cellular material (Column 3 lines 15-20 and figures).

With respect to claim 11 Bruck as modified discloses the claimed invention except for wherein the porous layer is formed from several layers of knitted aluminum goods which are pressed together to form a mat. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use knitted aluminum, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

With respect to claim 12 Bruck further discloses wherein the hollow chambers are of different height (see figure).

With respect to claim 13 Bruck further discloses wherein at least several of the hollow chambers are open on one side and form part of a common air space enclosed in the resonance absorber (abstract and figure 2 which is the representative figure)

With respect to claim 14 the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

With respect to claim 15 the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

With respect to claim 16 Bruck further discloses wherein the resonance absorber is formed of a closed-cell cellular material foil (Column 4 lines 55-60).

With respect to claim 17 Bruck further discloses wherein the resonance absorber comprises a structural component (2 in figure 2) and a carrier component (3 in figure 2) connected to it, wherein the hollow chambers are formed in the structural component and the structural component formed from a material section whose wall thickness is smaller than that of a material section from which the carrier component is formed (see figure 2).

With respect to claim 18 the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

With respect to claim 21 Parkinson further discloses wherein the porous layer is disconnectably connected to the resonance absorber. Parkinson specifically states that the porous member may be supported in any convenient manner if such is desired. This suggest sit is not necessary to permanently connect the porous member. Furthermoreit

has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. Nerwin v. Erlichman, 168 USPQ 177, 179.

With respect to claim 24Bruck further discloses wherein the component is designedas an engine compartment component (Column 3 lines 10-15).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck in view of Parkinson as applied to claim1 above, and further in view of Czerny (US20050241877).

With respect to claim 2 Bruck as modified discloses the invention as claimed except wherein the spacers are designed such that they form one piece with the resonance absorber.

Czerny disclose spacers (4) formed integral with a resonance member.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Czerny to form spacers integral with the structure of the resonance member with the device of Bruck as modified to limit the number of steps of construction and thus reduce cost.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck in view of Parkinson as applied to claim1 above, and further in view of WO 97-27370 (herein after Knipstein).

With respect to claim 10 Bruck as modified discloses the invention as claimed except wherein on the outside, the porous layer is covered by a micro-perforated metal foil. Parkinson does disclose a perforate outer covering though to one of micro perforated metal foil.

Knipstein discloses the use of a micro perforated metal foil for use in a sound absorber, which has a decorative finish (see abstract, also page 7 paragraph centered on line 25, page 4 lines 6-7 "yet another purpose...")

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Knipstein to have a microperforated metal foil in a sound absorber with the perforate covering layer of Bruck in view of Parkinson to have the perforated layer be able to reflect heat as is well known to be necessary in underhood applications.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck in view of Parkinson as applied to claim1 above, and further in view of Kingbury (US4048366).

With respect to claim 22 Bruck as modified discloses the invention as claimed except wherein the porous layer ha a hydrophobic finish or an oleophobic finish.

Kingsbury discloses a noise insulating member for an engine compartment which has a a hydrophobic finish or an oleaphobic finish (Column 5 lines 1-5).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Kingsbury to have a hydrophobic or oleophobic finish layer on the porous layer of Bruck as modified to prevent the porous member from becoming saturated and its attenuating effects diminished.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck in view of Parkinson as applied to claim 1 above, and further in view of Ang (US5976295).

With respect to claim 23 Bruck as modified discloses the invention as claimed except wherein the porous layer and the resonance absorber are made from plastics belonging to the same materials class.

Ang discloses the desirability of using all plastics of the same materials class in a sound-deadening member (abstract).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Ang to use only one materials class to manufacture a sound-deadening member with the device of Bruck as modified to allow the device to be recycled without the need of separation into its constituent parts (abstract).

Claims 6,8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck in view of Parkinson as applied to claim1 above, and further in view of Pfaffelhuber (US6202786), herein after '786.

With respect to claims 6 and 8 Bruck as modified discloses the invention as claimed except wherein the spacers have different distances from a mutual reference level which is situate on an outside or inside of the resonance absorber, and wherein the porous layer comprises sections which are spaced apart differently in realtion to a common reference level which is situated on an outside of the resonance absorber.

'786 discloses the use of spacers spacing a porous layer from resonant members, the spacers being of different height thus causing the porous layer to be

spaced differently and the spacers to be different distances from a reference level which is outside of inside of the resonance absorber.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of '786 to have different sized spacer and the resulting different distances with the device of Bruck as modified to provide a controllable space between the heights of the resonance members and the porous covering.

With respect to claim 20 '786 further discloses wherein the cicumferential margin area of the porous layer is connected to the resonance absorber (see figure 3).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Forrest M. Phillips whose telephone number is 5712729020. The examiner can normally be reached on Monday through Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 5712721988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FP

LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER